



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/784,007

02/20/2004

David P. Brennan

0250-0001

6983

33297 7590 04/03/2008  
BEEM PATENT LAW FIRM  
53 W. JACKSON BLVD., SUITE 1352  
CHICAGO, IL 60604-3787

EXAMINER

NORMAN, SAMICA L

ART UNIT

PAPER NUMBER

3696

MAIL DATE

DELIVERY MODE

04/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/784,007	<b>Applicant(s)</b> BRENNAN ET AL.	
	<b>Examiner</b> Samica L. Norman	<b>Art Unit</b> 3696	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

Claims 1-16 are pending.

The Objection to the Specification has been withdrawn due to applicant's current amendment.

The previous 35 USC 112, second paragraph Rejection has been withdrawn.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claims 1 and 16. Claims 1 and 16 recite the phrases “time span” and “time unit.” It is unclear as to how the degree of **time** is determined. A “time span” or “time unit” can be any range of time, i.e. a minute, a week or a year, which renders the phrases and therefore claims indefinite.

4. Claims 2-15 contain the same deficiencies as claim 1 through dependency and, as such, are rejected for the same reasons.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7, 10, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Li et al., U.S. Patent No. 7,043,449 (reference A on the attached PTO-892).

7. As per claim 1, Li et al. teaches a method for analyzing trade data for financial products comprising the following steps: selecting at least one financial product from a plurality of financial products (see column 6, lines 14-16), selecting a first time span (daily), wherein said first time span includes a plurality of time units (30 minutes) (see Figure 6A); determining trade data for said first time span for said at least one financial product (see Figure 6A); displaying said trade data according to said plurality of time units (see Figure 6A); selecting at least one of said plurality of time units; determining a second time span (Day 1 - Day 6), wherein said second time span includes at least said selected at least one time unit (see Figure 2A-1); determining prices and volumes for said at least one financial product for said second time span (see Figures 6A and B); classifying said prices according to a plurality of price zones by grouping together trade data that have prices within each of said plurality of price zones (see Figure 6C); displaying said plurality of price zones and corresponding volumes for said plurality of price zones (see Figure 6C).

Art Unit: 3696

8. As per claim 2, Li et al. teaches the method of claim 1 as described above. Li et al. further teaches wherein each one of said plurality of price zones is a discrete price (see column 2, lines 30-33).

9. As per claim 3, Li et al. teaches the method of claim 1 as described above. Li et al. further teaches wherein said financial product is a future contract (see column 8, line 23-28).

10. As per claim 4, Li et al. teaches the method of claim 1 as described above. Li et al. further teaches wherein said financial product is an option contract (see column 8, line 23-28).

11. As per claim 5, Li et al. teaches the method of claim 1 as described above. Li et al. further teaches selecting at least one price zone from said plurality of price zones (see Figure 6C); displaying a graph of prices versus time (see column 4, lines 65-67); drawing a price line corresponding to said selected at least one price zone (see column 5, lines 5-6).

12. As per claim 6, Li et al. teaches the method of claim 1 as described above. Li et al. further teaches wherein displaying corresponding volumes said plurality of price zones, further comprises: determining and displaying for each one of said plurality of price zones a corresponding volume over said second time span (see column 8, lines 18-39).

13. As per claim 7, Li et al. teaches the method of claim 1 as described above. Li et al. further teaches wherein determining said second time span, comprises the steps: selecting a count of time units, wherein said second time span includes said selected at least one of said plurality of time units and said count of time units occurring before said selected at least one of said plurality of time units (see column 6, lines 58-61).

14. As per claim 10, Li et al. teaches the method of claim 1 as described above. Li et al. further teaches wherein displaying said trade data further comprises: determining and displaying

Art Unit: 3696

for each one of said plurality of time units a composite implied volatility (see column 9, lines 29-38).

15. As per claim 11, Li et al. teaches the method of claim 1 as described above. Li et al. further teaches wherein displaying said plurality of price zones further comprises: determining and displaying for each one of said plurality of price zones a modified composite implied volatility (see column 9, lines 29-38).

16. As per claim 16, Li et al. teaches a method for analyzing trade data for financial products comprising the following steps: selecting at least one financial product from a plurality of financial products (see column 6, lines 14-16); selecting a first time span (see Figure 6A); selecting a time unit size (see Figure 6A); dividing said first time span into a plurality of time units (see Figure 6A); determining first trade data for said at least one financial product, wherein said first trade data comprises contract prices (see Figure 6A); classifying said first trade data into said plurality of time units (see Figure 6A); selecting a subspan of said first time span (see Figure 6A); determining a second time span, wherein said second time span includes at least said selected subspan (see Figure 2A-1); determining second trade data for said at least one financial product for said second time span, wherein said second trade data comprises contract prices (see Figures 6A and B); classifying said second trade data according to a plurality of price zones by grouping together trade data that have prices within each of said plurality of price zones (see Figure 6C); selecting at least one price zone of said plurality of price zones (see Figure 6C); identifying a subset of said first trade data having contract prices within said selected price zone (see Figure 6C).

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al., U.S. Patent No. 7,043,449 (reference A on the attached PTO-892) in view of Annunziata, U.S. Patent No. 6,681,211 (reference B on the attached PTO-892).

19. As per claim 8, Li et al. teaches the method of claim 1 as described above. Li et al. does not explicitly teach wherein displaying said trade data further comprises: displaying for each one of said plurality of time units at least one volume corresponding to at least one of a plurality of trader groups. Annunziata teaches wherein displaying said trade data further comprises: displaying for each one of said plurality of time units at least one volume corresponding to at least one of a plurality of trader groups (each trader) (see paragraph 0043, lines 9-14). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this feature into the method of Li et al. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of monitoring and reviewing the transactions and performance of each of the traders (see paragraph 0043, lines 18-21 of Annunziata).

Art Unit: 3696

20. As per claim 9, Li et al. teaches the method of claim 1 as described above. Li et al. does not explicitly teach wherein displaying said plurality of price zones further comprises: displaying for each one of said plurality of price zones at least one volume corresponding to at least one of a plurality of trader groups. Annunziata teaches wherein displaying said plurality of price zones further comprises: displaying for each one of said plurality of price zones at least one volume corresponding to at least one of a plurality of trader groups (see paragraph 0043, lines 9-14 and paragraph 0032, lines 1-4 and 17-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this feature into the method of Li et al. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of monitoring and reviewing the transactions and performance of each of the traders (see paragraph 0043, lines 18-21 of Annunziata).

21. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al., U.S. Patent No. 7,043,449 (reference A on the attached PTO-892) in view of Thompson et al., U.S. PG-Pub No. 2004/0133500 (reference C on the attached PTO-892).

22. As per claim 12, Li et al. teaches the method of claim 1 as described above. Li et al. does not explicitly teach wherein displaying said plurality of price zones further comprises: determining and displaying for a subset said plurality of price zones (prices between bid and ask, Figure 21) an in-the-money pain strike price (intrinsic value), wherein said subset of said plurality of price zones correspond to prices which are in-the-money. Thompson et al. teaches wherein displaying said plurality of price zones further comprises: determining and displaying



Art Unit: 3696

for a subset said plurality of price zones an in-the-money pain strike price, wherein said subset of said plurality of price zones correspond to prices which are in-the-money (see paragraph 0105, lines 22-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this feature into the method of Li et al. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of using market trend indicators to make better trade decisions (see paragraph 0104, lines 17-19 of Thompson et al.).

23. As per claim 13, Li et al. teaches the method of claim 1 as described above. Li et al. does not explicitly teach wherein displaying said plurality of price zones further comprises:

determining and displaying for a subset said plurality of price zones an out-of-the-money pain strike price (time value), wherein said subset of said plurality of price zones correspond to prices which are out-of-the-money. Thompson et al. teaches wherein displaying said plurality of price zones further comprises: determining and displaying for a subset said plurality of price zones an out-of-the-money pain strike price, wherein said subset of said plurality of price zones correspond to prices which are out-of-the-money (see paragraph 0105, lines 25-27). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this feature into the method of Li et al. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of using market trend indicators to make better trade decisions (see paragraph 0104, lines 17-19 of Thompson et al.).

24. As per claim 14, Li et al. teaches the method of claim 1 as described above. Li et al. does not explicitly teach wherein displaying said plurality of price zones further comprises:

determining and displaying for a subset of said plurality of price zones an in-the-money pain open interest (open interest), wherein said subset of said plurality of price zones correspond to

Art Unit: 3696

prices have prices which are in-the-money. Thompson et al. teaches wherein displaying said plurality of price zones further comprises: determining and displaying for a subset of said plurality of price zones an in-the-money pain open interest, wherein said subset of said plurality of price zones correspond to prices have prices which are in-the-money (see paragraph 0105, lines 22-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this feature into the method of Li et al. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of using market trend indicators to make better trade decisions (see paragraph 0104, lines 17-19 of Thompson et al.).

25. As per claim 15, Li et al. teaches the method of claim 1 as described above. Li et al. does not explicitly teach wherein displaying said plurality of price zones further comprises: determining and displaying for a subset of said plurality of price zones an out-of-the money pain open interest, wherein said subset of said plurality of price zones correspond to prices have prices which are out-of-the-money. Thompson et al. teaches wherein displaying said plurality of price zones further comprises: determining and displaying for a subset of said plurality of price zones an out-of-the money pain open interest, wherein said subset of said plurality of price zones correspond to prices have prices which are out-of-the-money (see paragraph 0105, lines 25-27). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this feature into the method of Li et al. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of using market trend indicators to make better trade decisions (see paragraph 0104, lines 17-19 of Thompson et al.).

**\*The Examiner is using the following definitions to aid in examination.**

Art Unit: 3696

**In the Money** option contract on a stock whose current market price is above the striking price of a call option or below the striking prices of a put option.

**Out of the Money** term used to describe an option whose strike price for a stock is either higher than the current market value, in the case of a call, or lower, in the case of a put.

**Exercise Price** price at which the stock or commodity underlying a call or put option can be purchased (call) or sold (put) over the specified period.

**Implied Volatility** the volatility in spot prices that sets the Black-Scholes formula value equal to the observed option premium.

### ***Response to Arguments***

26. Applicant's arguments with respect to claims 1-11 and 16 have been considered but are moot in view of the new ground(s) of rejection.

27. Applicant's arguments filed December 18, 2007, regarding claims 12-15, have been fully considered but they are not persuasive. Applicant argues that Thompson does not disclose determining and displaying for a subset of the plurality of price zones an in-the-money pain strike price and out-of the-money pain strike price. The teaches are further clarified under the rejections of claims 12-15 and are displayed in Figure 21 of Thompson.

***Conclusion***

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samica L. Norman whose telephone number is (571)270-1371. The examiner can normally be reached on Mon-Thur 6:30a-4p, w/ 1st Fri off & 2nd 6:30a-3p.

29. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dixon can be reached on (571) 272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

30. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ella Colbert/  
Primary Examiner, Art Unit 3696

sln